

The biggest bioengineering competition on Earth

iGEM 2026:

Oxford University



*Engineering bee gut bacteria to produce a **dsRNA therapeutic** against the **biggest threat to honey bee colonies, Varroa mites***



Opportunity

Varroa mites are the leading cause of global honey bee decline, involved in 60% of colony losses in the US alone

Emerging resistance against existing controls and their **toxic effects** have led to **increasing demand** for **resilient agriculture, biocontrol solutions, pollinator protection, and sustainable, non-toxic pest management**

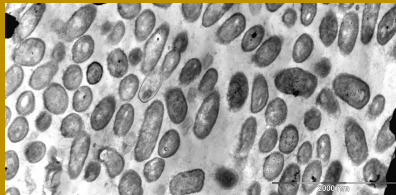
- collapsing bee colonies
- pesticide resistance
- viral transmission (DWV)
- global food security risk
- pollinator decline



The Solution

Engineer *Snodgrassella alvi*, a bee gut symbiont, to express a high concentration of a dsRNA therapeutic.

- **Integrated long-term colony** protection
- Targets highly conserved **Varroa mite-specific genes**, unlikely to incur **resistance**
- **Adaptable platform** that can be used to **target** other pests



Engineered *S. alvi*



dsRNA therapeutic



Varroa mite-Infected honey bee colony

Solution across \$50B+ Markets in Agriculture & Biotech

Honey bee **pollination**
underpins agriculture:

- contribute **\$15B** to US economy
- **~1/3** of **US food supply** depends on honey bee pollination



Global **honey** market valued at **~\$12B** and **growing**

Pesticide market to reach **\$22B** by **2030**

In California alone, **over 2.5 million colonies** die annually, with **mites** being a top factor

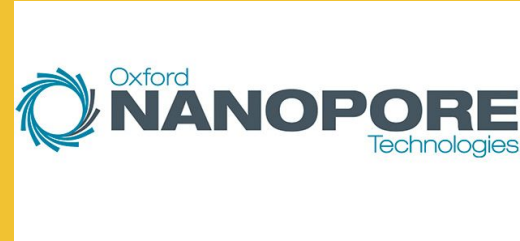


Why Sponsor Us?

- Support the development of a **breakthrough research project with commercial potential**
- **Direct connection** with a team of **highly driven Oxford STEM student**: future founders/researchers.
- **Brand exposure** at the **iGEM Grand Jamboree in Paris (5,000+ attendees across biotech, 50+ startups and 45+ industry representatives, policy advisors, and investors)**
- Early visibility into **potential IP and spinouts**: many iGEM projects become startups (350+ to date, e.g. Ginkgo Bioworks, including Oxford's 2024 team securing half a million dollars in funding).



Previous Sponsors Include:



Project Budget

£50,000



£15,000

- iGEM registration and other fees



£20,000

- Wet lab reagents & consumables
- Dry lab software & computational resources



£15,000

- Travel & accommodation
- Industry research & public engagement



Sponsorship levels

Bronze Tier	£500 - £999	<ul style="list-style-type: none">• Your logo on our website and competition poster
Silver Tier	£1,000 - £2,999	<ul style="list-style-type: none">• Medium logo on website+poster• Acknowledgement in materials and presentation• Get regular updates from the team
Golden Tier	£3,000 - £7,499	<ul style="list-style-type: none">• Large logo on all materials• Direct access to the team (personal meetings)• Acknowledgment at events• Co-branding
Platinum Tier	£7,500+ Typical partners: £7.5K – £15K	<ul style="list-style-type: none">• Featured as lead sponsors in all external communications• Featured in final presentation & publications• Direct collaboration opportunities• Priority recruitment access• Early insight into potential IP & spinout direction



→ Open to **negotiation for different means of support and custom conditions**

The iGEM competition

World's largest genetic engineering competition and synthetic biology startup accelerator.

Each year, teams from **400+ institutions** design, build and test **engineered biological systems**, impacting **key life sciences fields** (medicine, environment, public health and many more

- We have large potential to **win the gold medal** and **many Special Prizes**
- Creating a modular, reusable genetic system provides a **long-term, adaptable solution** to the Varroa mite problem



Oxford's consistent success

2025 | Silver

CRISPR-based detection of antimicrobial resistance and programmable DNA therapeutics to selectively eliminate pathogenic bacteria.

2024 | Gold

OneRing, a plasmid designed to eliminate antimicrobial-resistant bacteria. **Nominated for Best Infectious Diseases Project, Undergrad & Overgrad.**

2023 | Silver

Synthetic biosensory system for bacterial detection. **Nominated for Safety and Security Award, Undergrad.**

2019 | Gold

Engineered a probiotic bacterium to target and eliminate bacterial pathogens. **Nominated for Best Therapeutics Project, Undergrad.**

2018 | Gold

Novel treatment design for inflammatory bowel disease. **Best Therapeutics Project. Nominated for Best Wiki, Integrated Human Practices, and Entrepreneurship, Undergrad.**

2017 | Gold

Diagnostic approach to a neglected tropical disease. **Best Diagnostic Project. Nominated for best Wiki, Design, Model, Integrated Human Practices, and Presentation, Undergrad.**

2014 | Gold

Synthetic biology device that senses and degrades chlorinated solvents.

Oxford's iGEM team has consistently produced **globally competitive and innovative** projects.



Project Timeline

January-March

Team formation
& Project ideation

Project concept
and design

Fundraising

Baseline research

April-August

Engineering

Computational
modelling

Laboratory
experiments

September-October

Project submission

Testing, impact
evaluation,
industry feedback

Project
documentation,
submission

November

Jamboree

World Expo of Synthetic
Biology in Paris

Projects presented and
judged by academic and
industry experts



Our Team

An **interdisciplinary group** of Oxford biology, biochemistry, engineering, and chemistry students mentored by experts from across Oxford's life sciences departments.



Roman Lorello
MBiol



David Theodor
Nimrichtr
MBioMedSci



Laura Konarska
MChem



Samantha
Buchan
MBiol



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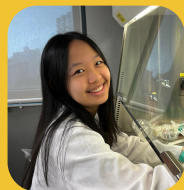
Aliyan
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10+ expert
mentors from
across Oxford
University

